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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/423,454	11/08/1999	ROBERT KUTKA	P99.2301	6761

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EXAMINER

WONG, ALLEN C

ART UNIT	PAPER NUMBER
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2613

12

DATE MAILED: 08/26/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/423,454

Applicant(s)

KUTKA ET AL.

Examiner

Allen Wong

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 June 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 27-52 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 27-52 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Response to Arguments

1. Applicant's arguments filed 6/9/03 have been fully read and considered but they are not persuasive.

Claims 27-29, 35-40, 42-44, 46-50 and 52

Regarding the bottom paragraph on page 8 to line 5 on page 9 of applicant's remarks, applicant states that Pullen does not disclose the element of having the one ungrouped picture element that is not transmitted to the second arrangement being from at least one area of said image located between image segments, but rather discloses such non-transmitted elements as being those elements in successive frames that have not changed from one frame to another. The examiner respectfully disagrees. First, the claims were written in such a broad manner, that they are treated accordingly since the claims do not specifically show any distinction between time-based compression and space-based compression. As stated before, Pullen's fig.1, elements 16, 12, 28, 30 and 32 comprise a first arrangement, where fig.1, element 12 is a compression processor unit having present frame memory 16 and previous frame memory 30, a local decompressor 28 and vector quantization table 32, where at least one pixilated image area is located and obtained by gathering only the pixilated data difference between the current frame and the previous frame and preparing the transmission of the pixilated data difference, and the unchanged pixilated data is not sent for conserving bandwidth.

In addition, Pullen also teaches resolving the problem of block artifacts or distortion, as disclosed in column 11, line 53 to column 12, line 28, where Pullen

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discloses the distortion measurement or dealing abrupt changes of the values of the encoding information at the image block edges. Clearly, Pullen takes block artifacts into consideration when encoding. Thus, Pullen discloses the space-based compression mechanism for remedying the typical problems of block artifacts, object edge artifacts or distortion.

Claims 30-34 and 45

Regarding page 11, line 21 to page 12, line 2 of applicant's remarks, applicant reasserts the same arguments as discussed in the above paragraphs, ie. paragraph 1 back on page 8, in that Pullen does not teach the ungrouped picture element being from at least one area of the image located between image segments and thereby respectfully requests the withdraw of the 103 rejection. The examiner respectfully disagrees. Since the issue has already been discussed in this Office Action, please see the above paragraphs of this Office Action for elaboration.

Pullen discloses image filtering prior to encoding (col.6, lines 55-58). Pullen does not specifically disclose the low-pass filtering of images. However, Girod teaches the use of low-pass image filtering (fig.4, element 403). Therefore, it would have been obvious to one of ordinary skill in the art to combine the teachings of Pullen and Girod for applying the use of a low-pass image filter to trim out discrepancies so as to efficiently encode images while maintaining accuracy. Doing so would yield smooth images at the display output.

Claims 41 and 51

Regarding lines 11-15 of applicant's remarks, applicant reasserts the same arguments as discussed in the above paragraphs, ie. paragraph 1 back on page 8, in that Pullen does not teach the ungrouped picture element being from at least one area of the image located between image segments and thereby respectfully requests the withdraw of the 103 rejection. The examiner respectfully disagrees. Since the issue has already been discussed in this Office Action, please see the above paragraphs of this Office Action for elaboration.

Pullen discloses the H.263 video encoding standard (col.1, lines 39-43, Pullen discloses the MPEG encoding). Pullen does not disclose the use of H.245 standard. However, Kwan teaches the use of H.245 standard along with H.263 standard (fig.2, element 56). Therefore, it would have been obvious to one of ordinary skill in the art to take the teachings of Pullen and Kwan as a whole for employing the H.245 standard so as to accurately encode images in an efficient manner, while maintaining with today's highly complex video encoding/decoding standards.

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) do not apply to the examination of this application as the application

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being examined was not (1) filed on or after November 29, 2000, or (2) voluntarily published under 35 U.S.C. 122(b). Therefore, this application is examined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

2. Claims 27-29, 35-40, 42-44, 46-50 and 52 are rejected under 35 U.S.C. 102(e) as being anticipated by Pullen (5,867,221).

Regarding claim 28, Pullen discloses a method for encoding and decoding a digitized image having picture elements, said method comprising the steps of:

grouping all except at least one picture at least one picture elements of a digitized image into a number of image segments in a first arrangement, said at least one ungrouped picture element being from at least one area of said image located between image segments (note fig.1, elements 16, 12, 28, 30 and 32 comprise a first arrangement, where fig.1, element 12 is a compression processor unit having present frame memory 16 and previous frame memory 30, a local decompressor 28 and vector quantization table 32, where at least one pixilated image area is located and obtained by gathering only the pixilated data difference between the current frame and the previous frame and preparing the transmission of the pixilated data difference, and the unchanged pixilated data is not sent for conserving bandwidth; col.11, ln.53 to col.12, ln.28);

encoding said image in said first arrangement by only encoding said picture elements being grouped into an image segment (fig.1, element 12);

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transmitting said encoded image segments from said first arrangement to a second arrangement (fig.1, element 14 is a transmitter, where the interconnected elements 18, 20, 32 and 24 comprise a second arrangement);

decoding said transmitted image segments in said second arrangement (fig.1, element 20);

inserting new picture elements corresponding to said non-encoded picture elements of said encoded image in said second arrangement in an area between said decoded image segments (col.8, lines 43-48; fig.1, note image data is decoded at element 20 into map codes and then utilized for inserting new picture elements to the non-encoded picture elements);

interpolating said area between said image segments in said second arrangement (fig.1, note elements 20, 24 and 32 function to interpolate the area between the image segments, where 32 is the vector quantization tables); and

allocating encoding information resulting from said interpolating to said new picture elements (fig.1, note elements 20, 24 and 32 function to interpolate the area between the image segments, where 32 is the vector quantization tables and element is the regenerated frame buffer, thus the encoding information is allocated).

Note claims 27, 43-44 and 46 have similar corresponding elements.

Regarding claim 29, Pullen discloses image filtering (col.6, lines 55-58).

Regarding claims 35-36, Pullen discloses the image segments are image blocks (see figs.3-5 and 8).

Regarding claims 37-39 and 47-49, Pullen discloses the use of filters for interpolation (col.20, ln.54 to col.21, ln.19).

Regarding claims 40 and 50, Pullen discloses the H.263 video encoding standard (col.1, lines 39-43, Pullen discloses the MPEG encoding).

3. Regarding claims 42 and 52, Pullen discloses the use of motion compensation (col.8, lines 48-55).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 30-34 and 45 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pullen (5,867,221) in view of Girod (5,854,858).

Regarding claims 30-34 and 45, Pullen discloses image filtering prior to encoding (col.6, lines 55-58). Pullen does not specifically disclose the low-pass filtering of images. However, Girod teaches the use of low-pass image filtering (fig.4, element 403). Therefore, it would have been obvious to one of ordinary skill in the art to combine the teachings of Pullen and Girod for applying the use of a low-pass image filter to trim out discrepancies so as to efficiently encode images while maintaining accuracy. Doing so would yield smooth images at the display output.

6. Claims 41 and 51 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pullen (5,867,221) in view of Kwan (5,910,827).

With regards to claims 41 and 51, Pullen discloses the H.263 video encoding standard (col.1, lines 39-43, Pullen discloses the MPEG encoding). Pullen does not disclose the use of H.245 standard. However, Kwan teaches the use of H.245 standard along with H.263 standard (fig.2, element 56). Therefore, it would have been obvious to one of ordinary skill in the art to take the teachings of Pullen and Kwan as a whole for employing the H.245 standard so as to accurately encode images in an efficient manner, while maintaining with today's highly complex video encoding/decoding standards.

Conclusion

7. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Allen Wong whose telephone number is (703) 306-

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5978. The examiner can normally be reached on Mondays to Thursdays from 8am-6pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Christopher Kelley can be reached on (703) 305-4856. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9314 for regular communications and (703) 872-9314 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-4700.

Allen Wong
Examiner
Art Unit 2613

AW
August 21, 2003


CHRIS KELLEY
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